Medicaid Long-Term Services and Supports in Maryland:

FY 2015 to FY 2019

Nursing Facility Services
A Chart Book

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Maryland Department of Health

UMBC
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Background

Maryland Home and Community-Based Services

The Medicaid Long-Term Services and Supports (LTSS) in Maryland Chart Book, Nursing Facility Services explores utilization and expenditures for Medicaid-funded LTSS in Maryland for state fiscal years (FYs) 2015 through 2019. The focus of this chart book is on Medicaid nursing facility services, with one chapter that illustrates Maryland’s efforts at providing home and community-based services (HCBS)* to an increasing number of Medicaid recipients who may otherwise be served in nursing facilities. Medicaid programs and services addressed in this chart book include the following:

▪ Medicaid Nursing Facility Services
▪ The Home and Community-Based Options (CO) Waiver
▪ Community First Choice (CFC)
▪ Community Personal Assistance Services (CPAS)

This chart book summarizes information on demographic, functional, and cognitive characteristics; chronic conditions, pain assessments, and medication use; and service utilization and expenditures for Maryland Medicaid nursing facility residents from FYs 2015 to 2019. Demographic and expenditure data are also provided for programs that are vital to Maryland’s LTSS balancing efforts.

For the purposes of this chart book, a Medicaid nursing facility resident is defined as a Medicaid beneficiary who had at least one Medicaid-paid day in a nursing facility, a bed hold payment, or Medicaid cost-sharing payments (premiums, co-payments, etc.).** In FY 2019, Maryland’s annual Medicaid nursing facility resident count was 23,877.

Data Sources

The information in this chart book was derived from the following data sources:

▪ Medicaid Management Information System (MMIS2): This system contains data for all individuals enrolled in Maryland’s Medicaid program during the relevant fiscal years, including Medicaid eligibility category and fee-for-service (FFS) claims. All MMIS2 data, owned by the Maryland Department of Health, are warehoused and processed monthly by The Hilltop Institute.

▪ Maryland Office of Health Care Quality, Minimum Data Set (MDS) 3.0: The MDS is a federally mandated assessment instrument that is conducted for each nursing facility resident upon admission and at least quarterly thereafter. Hilltop receives MDS 3.0 data for Maryland nursing facilities on a routine basis.

*The HCBS population in this chart book excludes those in any Developmental Disabilities Administration waiver program, the Brain Injury Waiver, and the Autism Waiver.

**Medicare payment, including skilled nursing facility days up to the first 100 days, are excluded from these analyses.
Chapter 1. Maryland Medicaid LTSS Overview continued

Data Sources continued ...

- **Chronic Conditions Data Warehouse (CCW):** This is the source for CMS research data. Hilltop utilizes the CCW Condition Algorithms and Medicaid claims to identify chronic conditions among Medicaid beneficiaries.
- **Office of Health Care Quality (OHCQ):** This is an agency charged with monitoring the quality of care in Maryland’s health care facilities and community-based programs. Hilltop uses OHCQ data to determine licensed nursing facility beds.

Key Findings

Notable trends in the data include the following.

**Nursing Facility Entry**

- The majority (87%) of nursing facility residents were admitted from an acute hospital setting in FY 2019.
- Hypertension was an active diagnosis in more than 70% of nursing facility admissions from FY 2015 to FY 2019.
- The ratio of admissions to re-entries fluctuated during the study period. In FY 2015, for every 1.34 admissions there was 1 re-entry; by FY 2017, this ratio was 1.44 to 1, and by FY 2019 it was 1.20 to 1.
- Inpatient costs accounted for 57% of acute care costs in the six months prior to admission in FY 2019.

**Nursing Facility Stay**

- The Maryland nursing facility population decreased from 25,009 residents in FY 2015 to 23,877 residents in FY 2019. This is a decrease of approximately 5%.
- Across the study period, 40% to 43% of nursing facility residents had stays of four months or less.
- Female nursing facility residents continued to outnumber males in FY 2019: 62% to 38%, respectively.
- In FY 2019, the largest racial group of nursing facility residents continued to be White (52%), followed by Black (39%).
- Nursing facility residents aged 85 and older decreased from 34% in FY 2015 to 32% in FY 2019 but still remained the largest age group.
- Baltimore City, Baltimore County, and Montgomery County each had over 3,000 nursing facility residents and licensed nursing facility beds in FY 2019. Montgomery County had the most providers (40).
- The percentage of residents needing the highest level of assistance with activities of daily living (ADLs) decreased, while the percentage of those needing minimal assistance increased during the study period.
- The percentage of nursing facility residents cognitively intact averaged 46% during the study period.
- The most common diagnosis among nursing facility residents during the study period was hypertension.

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Chapter 1. Maryland Medicaid LTSS Overview continued

Notable Trends continued ...

- The number of nursing facility residents diagnosed with six or more chronic conditions increased 6%, and the number of residents diagnosed with no conditions decreased 51%.
- The percentage of nursing facility residents diagnosed with depression increased from 34% in FY 2015 to 45% in FY 2019.
- Psychotropic medication use remained relatively stable during the study period.
- In FY 2019, 68% of nursing facility residents indicated that they had no pain in the last five days.
- The number of hospice users increased from 1,993 in FY 2015 to 2,519 in FY 2019, a 26% increase. Similarly, hospice service expenditures increased 28% during the study period.
- Total Medicaid expenditures for nursing facility residents were lower for those under 65 years compared to those 65 and over for each of the study years.
- On average, from FY 2015 to FY 2019, total Medicaid per member per month (PMPM) expenditures were $6,732 for all age groups.

Nursing Facility Discharges

- The percentage of residents discharged to the community was 36% in FY 2015 and 33% in FY 2019.
- The majority (71%) of nursing facility residents discharged to the community received a CO, CFC, or CPAS service. Of these discharged residents, 41% received case management/supports planning assistance.

In the Community

- HCBS users increased from 37% of LTSS users in FY 2015 to 45% of LTSS users in FY 2019.
- Between FY 2015 and FY 2019, HCBS expenditures increased steadily—at an average of 11% per year, while nursing facility expenditures increased an average of 1% each year.
- On average, annual costs for HCBS users were $24,758 less than they were for nursing facility residents.
- PMPM total Medicaid expenditures were consistently lower for HCBS users than for nursing facility residents.
Chapter 2. Nursing Facility Entry
Chapter 2. Nursing Facility Entry

Key Findings

Pre-Admission Status

The majority of nursing facility residents were admitted from an acute care hospital: 86% in FY 2015 and 87% in FY 2019 (Figure 1). Only 5% of nursing facility residents in FY 2015 and 6% in FY 2019 were admitted directly from the community.

Active Diagnoses at Time of Nursing Facility Admission

The top five active diagnoses for all study years were hypertension, diabetes mellitus, hyperlipidemia, depression, and anemia. The MDS defines an active diagnosis as a disease that has a relationship to the resident’s current functional, cognitive, mood, or behavior status or medical treatments. The MDS is administered upon admission to a nursing facility and specifically asks about active diagnoses present in the last seven days. Hypertension was present in more than 70% of residents and steadily increased over the reporting period. The percentage of nursing facility residents with an active anemia diagnosis decreased slightly during the reporting period, while the percentage of those with an active hyperlipidemia diagnosis increased each year. See Figure 2.

Entry Status

A nursing facility resident can enter the facility as a regular admission or as a re-entry. A re-entry or re-admission occurs if the resident was discharged from a nursing facility within the past 30 days. Nursing facility admissions decreased from 57% in FY 2015 to 55% in FY 2019, while nursing facility re-entries increased from 43% in FY 2015 to 45% in FY 2019. See Figure 3.

Acute Care Costs Prior to Nursing Facility Entry

During the six months prior to a nursing facility admission, inpatient costs accounted for the largest percentage (57%) of acute care costs. Acute care costs include inpatient and outpatient services, physician services, and pharmacy services. See Figure 4.
Note: Community includes private home/apartment, board/care, assisted living, or group home. Other entry places include psychiatric hospital, inpatient rehabilitation facility, intellectual disabilities/developmental disabilities (ID/DD) facility, hospice, long-term care hospital, and other. Missing data includes nursing facility residents from MMIS2 data that are missing MDS data from the time of admission.

Source: MDS and MMIS2

The majority of nursing facility residents were admitted from an acute hospital: 86% in FY 2015 and 87% in FY 2019. Only 5% and 6% of nursing facility residents were admitted directly from the community in FY 2015 and FY 2019, respectively.
The top five active diagnoses upon admission to a nursing facility were hypertension, diabetes mellitus, hyperlipidemia, depression, and anemia. Hypertension was present in more than 70% of nursing facility admissions in each of the study years and increased from FY 2015 to FY 2017 before stabilizing in FYs 2018 and 2019. During the study period, there was a slight decrease in the percentage of those with an active anemia diagnosis upon admission, and a small increase in those with active hyperlipidemia diagnosis upon admission.
During the study period, the admission type for individuals based on the most recent stay assessment, indicated a nursing facility admissions generally decreased, and the number of re-entries generally increased. The ratio of admissions to re-entries declined from FY 2015 to FY 2019. Specifically, in FY 2015, for every 1.34 admissions, there was 1 re-entry; by FY 2019, the ratio was 1.20 to 1. A re-entry or re-admission is an admission that occurs within 30 days of a previous nursing facility discharge.

Note: Data shown for individuals for which there was valid MDS data to determine admission type.

Source: MDS
In FY 2019, acute care costs totaled approximately $116 million in the six months prior to a nursing facility admission. Inpatient costs accounted for 57% of these costs. Physician costs was the next highest category, at 17% of acute care costs.

**Figure 4. Acute Care Costs in the Six Months Prior to a Nursing Facility Admission, FY 2019**

- **Inpatient** $65,914,674 (57%)
- **Physician** $19,735,011 (17%)
- **Outpatient** $9,581,046 (8%)
- **Pharmacy/Medicine** $9,191,882 (8%)
- **Special Services** $6,974,573 (6%)
- **Other** $4,448,532 (4%)

*Special services* includes Medicare crossover payments, lab, diagnostic and evaluation services, radiology, ambulance, surgery, durable medical services and equipment, oxygen, and individualized education plan (IEP)-related services.

**Other services** include managed care organizations, emergency department, and dental services.

Source: MMIS2
Chapter 3. Nursing Facility Stay
Chapter 3. Nursing Facility Stay

Key Findings

Resident Counts and Length of Stay

There were 23,877 Maryland nursing facility residents in FY 2019—a decrease of 5% from FY 2015 (Figure 5). The lengths of stay for nursing facility residents remained relatively stable throughout the study period. In FY 2019, 17% of nursing facility residents had a length of stay less than one month, and an additional 23% had a length of stay of one to four months (Figure 6).

Demographics

The gender, race, and age distribution of the nursing facility residents remained relatively stable during the study period. Females continued to outnumber males; in FY 2019, the distribution was 62% to 38%. White residents continued to make up the largest racial group, followed by Black residents. Residents aged 85 and older made up the largest age group, averaging 32% during the study. In FY 2019, dual-eligible nursing facility residents (those who have both Medicare and Medicaid coverage) made up 88% of all residents, while non-dual-eligible residents (those only covered by Medicaid) made up 12% of residents. See Figure 7.


Geographical Characteristics

Baltimore City had the largest number of nursing facility residents, followed by Baltimore County and Montgomery County, respectively (Figure 8). Baltimore County had the largest amount of licensed nursing facility beds, while Montgomery County had the most providers (Figure 9).

Functional Characteristics

The functional needs of nursing facility residents are assessed using the MDS 3.0. The different levels measure the resident’s need for assistance to perform various ADLs, including personal hygiene, toilet use, locomotion, and eating. Supervision* requires the least amount of assistance, while total dependence* requires the most. Figure 10 indicates that there was an increase in residents requiring the least amount of assistance, from 9% in FY 2015 to 11% in FY 2019. There was also a decrease in those requiring the most assistance, from 9% in FY 2015 to 6% in FY 2019.

Cognitive functioning of nursing facility residents is measured using the Brief Interview for Mental Status (BIMS). The cognitive functioning of residents changed little during the study period. A large percentage of residents continued to be cognitively intact, averaging 46% during the study period (Figure 11).

continued on next page ...
Chapter 3. Nursing Facility Stay continued

Key Findings continued …

Chronic Conditions

The top eight chronic conditions of nursing facility residents for FYs 2015 and 2019 included hypertension, Alzheimer’s disease and related disorders, diabetes, anemia, depression, ischemic heart disease, chronic kidney disease, and hyperlipidemia. The largest percentage of residents (over 60%) were diagnosed with hypertension in both FYs 2015 and 2019. The percentage of nursing facility residents diagnosed with any of the top eight chronic conditions increased during the study period. The condition with the largest percentage increase was depression, at 11%. See Figure 12.

Figure 13 illustrates that the number of residents diagnosed with six or more chronic conditions increased from FY 2015 to FY 2016, decreased from FY 2017 to FY 2018, and then increased in FY 2019.

Among the top 18 chronic conditions nursing facility residents were diagnosed with, four were mental illnesses: depression, bipolar disorder, anxiety disorders, and schizophrenia and other psychotic disorders. The percentage of residents diagnosed with bipolar disorder decreased from a high of 20% in FY 2015 to a low of 8% in FY 2019. However, the percentage of residents diagnosed with depression and anxiety disorders increased each year. See Figure 14.

Medication Use

Figure 15 shows psychotropic medication use among nursing facility residents. The percentage of residents taking antipsychotic medications at least once during the last seven days decreased slightly—from 19% in FY 2015 to 18% in FY 2019 —while the percentage of those taking antidepressants increased from 52% in FY 2015 to 53 % in FY 2019.

Pain Assessment and Management

During their MDS assessments, nursing facility residents are asked a series of questions about their pain in the last five days. In FY 2019, 50% of nursing facility residents were on a regular pain medication schedule, and the majority (68%) indicated no pain (Figure 16). Of the residents who did experience pain, 19% indicated a pain level of 5 on a scale of 0 to 10. See Figure 17.

Hospice Use and Expenditures

The number of hospice users increased from 1,993 in FY 2015 to 2,519 in FY 2019, an increase of 26%. During the same period, average annual expenditures increased 28%. See Figure 18.

continued on next page …
Key Findings continued ...

**Expenditures**

Total Medicaid expenditures increased from FY 2015 to FY 2019 for nursing facility residents aged 65 years and older. Those younger than 65 years saw an increase in expenditures from FY 2015 to FY 2017 but a decrease in 2018 before seeing an increase again in 2019 (Figure 19). Nursing facility expenditures accounted for 95% of total Medicaid expenditures for nursing facility residents in FY 2019. See Figure 20.
The average number of nursing facility residents with post-acute care-only stays was 2,403 for the study period. The average percentage of post-acute care-only residents was approximately 10% throughout the study period.

Source: MMIS2
The length of stay for nursing facility residents remained relatively stable during the study period. Approximately 18% of residents had stays less than one month, while a slightly higher percentage (approximately 23%) of residents had stays between one to four months. About one in five (21%) of nursing facility residents had stays between two and five years, while a smaller percentage (5%) had stays over five years. A typical nursing facility stay is 7 to 8 months, on average.
Females continued to outnumber males during the study period—62% to 38% in FY 2019—and White residents (52%) continued to make up the largest racial group, followed by Black residents (39%).

Nursing facility residents aged 85 and older were the largest age group during the five-year period, despite dropping from 34% in FY 2015 to 33% in FY 2019. The percentage of 65- to 74-year-olds increased from 19% in FY 2015 to 22% in FY 2019.

The percentage of dual-eligible residents increased from 87% in FY 2015 to 88% in FY 2019.

<table>
<thead>
<tr>
<th>Demographic</th>
<th>FY 15</th>
<th>FY 19</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>64%</td>
<td>62%</td>
</tr>
<tr>
<td>Male</td>
<td>36%</td>
<td>38%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td><strong>Race</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian</td>
<td>2%</td>
<td>3%</td>
</tr>
<tr>
<td>Black</td>
<td>36%</td>
<td>39%</td>
</tr>
<tr>
<td>Native American</td>
<td>0%</td>
<td>1%</td>
</tr>
<tr>
<td>White</td>
<td>47%</td>
<td>52%</td>
</tr>
<tr>
<td>Other/Unknown</td>
<td>14%</td>
<td>6%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 to 49</td>
<td>5%</td>
<td>4%</td>
</tr>
<tr>
<td>50 to 64</td>
<td>17%</td>
<td>17%</td>
</tr>
<tr>
<td>65 to 74</td>
<td>19%</td>
<td>22%</td>
</tr>
<tr>
<td>75 to 84</td>
<td>25%</td>
<td>25%</td>
</tr>
<tr>
<td>85 and older</td>
<td>34%</td>
<td>32%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td><strong>Dual-Eligibility</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dual-Eligible</td>
<td>87%</td>
<td>88%</td>
</tr>
<tr>
<td>Medicaid-Only</td>
<td>13%</td>
<td>12%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Notes: Other/Unknown includes Hispanic, Pacific Islander/Alaskan, and Unknown. Percentage rounded to the nearest whole number. Dual-eligible individuals include full and partial dual eligibles.

Source: MMIS2
Baltimore City, Baltimore County, and Montgomery County each had over 3,000 nursing facility residents in FY 2019. Eight counties—Calvert, Caroline, Dorchester, Kent, Queen Anne’s, Somerset, Talbot, and Worcester—had 300 or fewer residents.
Baltimore City, Baltimore County, and Montgomery County each had over 3,000 licensed nursing facility beds in FY 2019. Montgomery County had the largest number of providers (40), followed by Baltimore County (39) and Baltimore City (29). Seven counties—Calvert, Caroline, Dorchester, Kent, Queen Anne’s, Somerset, and Talbot—together had 300 or fewer licensed nursing facility beds. Queen Anne’s County had a single provider, followed by Dorchester, Kent, Somerset, and Talbot, all with two providers each.
Figure 10. Functional Levels of Nursing Facility Residents, FY 2015 and FY 2019

Functional levels measure a resident’s need for assistance to perform various ADLs. Hilltop incorporated a more precise functional level system from Morris et al.* The algorithm uses different combinations of ADL scores from the MDS (including eating, locomotion, personal hygiene, and toileting) and turns the five MDS scores into seven.¹ Supervision requires the least amount of assistance (either cueing or oversight from staff) OR a high level of resident involvement. Limited requires either cueing or staff oversight AND a high level of involvement from the resident. Extensive 1 indicates that both eating and locomotion require either cueing or staff oversight or a high level of involvement from the resident AND either or both personal hygiene and toileting require the resident to be involved but not engaging in any weight-bearing activity. Extensive 2 indicates either eating or locomotion requiring the resident to be involved but not engaging in any weight-bearing activity AND neither of these ADLs require full staff assistance. Dependent indicates one or both (eating and locomotion) require full staff assistance. Total dependence indicates that all four ADLs require full staff assistance.

Over the five-year study period, the percentage of residents requiring supervision increased from 9% (FY 2015) to 11% (FY 2019), and the percentage of residents who were totally dependent decreased from 9% (FY 2015) to 6% (FY 2019).

Source: MDS

¹ No participants were in the independent category, which indicates that no staff involvement is necessary to complete the ADL.
Figure 11. Cognitive Function of Nursing Facility Residents, FY 2015 and FY 2019

The BIMS measures the cognitive functioning of nursing facility residents. There were only slight changes between FY 2015 and FY 2019; specifically, residents who were cognitively intact decreased by 2%, while those with a severe cognitive impairment remained at 28%. The percentage of residents who were cognitively intact averaged 46% during the study.
Hypertension was diagnosed in the largest percentage of nursing facility residents in FYs 2015 and 2019, followed by Alzheimer’s disease and related disorders. The largest increase was seen in residents diagnosed with depression; this percentage jumped from 34% in FY 2015 to 45% in FY 2019, followed by chronic kidney disease (from 30% in FY 2015 to 39% in FY 2019).
From FY 2015 to FY 2019, the number of nursing facility residents diagnosed with six or more chronic conditions increased 6%, and the number of residents diagnosed with no conditions decreased 51%. It is worth noting that a nursing facility resident could be considered to have no chronic conditions due to another insurance provider paying the claims.

Sources: CCW and MMIS2
Four mental illnesses were among the top 18 chronic conditions that residents were diagnosed with during the study period. The percentage of residents diagnosed with depression increased—from 34% in FY 2015 to 45% in FY 2019. The percentage of residents diagnosed with anxiety disorders also increased—from 17% in FY 2015 to 26% in FY 2019. The percentage of residents diagnosed with schizophrenia and other psychotic disorders remained constant at 15% from FY 2016 to FY 2019. Additionally, there was a drop in the percentage of residents diagnosed with bipolar disorder from FY 2015 (20%) to FY 2019 (8%).
The percentage of residents receiving an antidepressant drug at least once in the previous seven days increased very slightly from 52% in FY 2015 to 53% in FY 2019. This coincides with the increased number of residents diagnosed with depression in FY 2019, shown in Figure 12. The percentage of residents receiving an antipsychotic drug decreased very slightly, from 19% in FY 2015 to 18% in FY 2019.

Source: MDS
Nursing facility residents are asked a series of questions about their pain in the last five days when assessed with the MDS. All residents are asked the first four questions in Figure 16, while only those responding Yes to the presence of pain question are asked about pain frequency and its impact on daily activities.

In FY 2019, 25% of nursing facility residents noted the presence of pain. Of these residents, 59% reported that the pain occurred occasionally, and 81% responded that there was no impact on their day-to-day activities during the last five days.

### Figure 16. Pain Assessment and Management, FY 2019

<table>
<thead>
<tr>
<th>MDS 3.0 Question Regarding Pain</th>
<th>Response</th>
<th>FY 19</th>
</tr>
</thead>
<tbody>
<tr>
<td>Received scheduled pain medication regime</td>
<td>No</td>
<td>50%</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>50%</td>
</tr>
<tr>
<td>Received PRN pain medication OR was offered and declined</td>
<td>No</td>
<td>76%</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>24%</td>
</tr>
<tr>
<td>Received non-medication intervention for pain</td>
<td>No</td>
<td>94%</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>6%</td>
</tr>
<tr>
<td>Presence of pain</td>
<td>No</td>
<td>68%</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>25%</td>
</tr>
<tr>
<td></td>
<td>Unable to answer</td>
<td>7%</td>
</tr>
<tr>
<td>Pain frequency</td>
<td>Rarely</td>
<td>10%</td>
</tr>
<tr>
<td></td>
<td>Occasionally</td>
<td>59%</td>
</tr>
<tr>
<td></td>
<td>Frequently</td>
<td>22%</td>
</tr>
<tr>
<td></td>
<td>Almost constantly</td>
<td>7%</td>
</tr>
<tr>
<td></td>
<td>Unable to answer</td>
<td>2%</td>
</tr>
<tr>
<td>Pain impacts activities</td>
<td>No</td>
<td>81%</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>17%</td>
</tr>
<tr>
<td></td>
<td>Unable to answer</td>
<td>2%</td>
</tr>
</tbody>
</table>

Source: MDS
In FY 2019, on a scale of 0 to 10—0 being no pain and 10 being the worst pain—of those nursing facility residents who reported having pain, 19.1% indicated a pain level of 5 during the previous five days.

Source: MDS
The number of hospice beneficiaries increased from 1,993 in FY 2015 to 2,519 in FY 2019, an increase of 26% during the study period.

Average annual expenditures increased from $35.0 million in FY 2015 to nearly $45.0 million by FY 2019, an increase of 28%.

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Number of Hospice Beneficiaries</th>
<th>Total Medicaid Expenditures</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>1,993</td>
<td>$35,033,685</td>
</tr>
<tr>
<td>2016</td>
<td>2,170</td>
<td>$35,265,533</td>
</tr>
<tr>
<td>2017</td>
<td>2,478</td>
<td>$42,983,115</td>
</tr>
<tr>
<td>2018</td>
<td>2,601</td>
<td>$44,613,638</td>
</tr>
<tr>
<td>2019</td>
<td>2,519</td>
<td>$44,971,215</td>
</tr>
</tbody>
</table>
Total Medicaid expenditures for those under 65 years were consistently much lower compared to those 65 years and over, most likely because there are fewer nursing facility residents younger than 65 years. Total Medicaid expenditures for residents under 65 fluctuated little during the study period, while expenditures for those 65 and older saw a constant increase from FY 2016 to FY 2019. There was an increase in total Medicaid expenditures from FY 2015 to FY 2016 for residents under 65 years but a decrease for those 65 years and older. The reverse happened in FY 2017 to FY 2018: there was a decrease in total Medicaid expenditures for those under 65 years but an increase for those 65 years and over.
Figure 20. Total Medicaid Expenditures for Nursing Facility Residents, with Other Medicaid Expenditures Breakdown, FY 2019

Total Medicaid expenditures for Maryland nursing facility residents were $1.28 billion in FY 2019. Of this, 95% was for nursing facility services, while 5% was for other Medicaid expenditures. The chart below illustrates the breakdown of this 5%, with the largest expense category being Medicare crossover payments ($21.4 million), followed by pharmacy/medicine expenditures ($17.5 million).

Note: Other Medicaid service expenditures include Medicaid expenditures with dates of service concurrent to a resident’s nursing facility claims and Medicaid expenditures for an intervening hospital stay (i.e., the beginning day of the hospital claim coincides with the last day of a nursing facility claim, and the last day of the hospital claim coincides with the beginning day of a nursing facility claim). Other services include mental health services, DDA behavioral services, community personal care services, hearing aids, drug abuse clinic, federally qualified health centers, mobile treatment program, psychiatric rehabilitation program, dental diagnostic, dental preventive, health home, private duty nursing service, diagnostic equipment, ER services, Community First Choice, anesthesiaology, vasectomy, surgery, radiology, oxygen, residential SUD services, emergency transport services, community options waiver, IEP/FSP (family service plan) school health-related services, STEPS case management, medical day care. Inpatient services include hospitalizations.

Source: MMIS2
Figure 21. PMPM Medicaid Expenditures for Nursing Facility Residents, by Age Group, FY 2015–FY 2019

<table>
<thead>
<tr>
<th></th>
<th>FY 15</th>
<th>FY 16</th>
<th>FY 17</th>
<th>FY 18</th>
<th>FY 19</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>All Ages</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nursing Facility Expenditures</td>
<td>$6,215</td>
<td>$6,230</td>
<td>$6,372</td>
<td>$6,473</td>
<td>$6,717</td>
</tr>
<tr>
<td>Other Medicaid Expenditures</td>
<td>$344</td>
<td>$361</td>
<td>$364</td>
<td>$345</td>
<td>$368</td>
</tr>
<tr>
<td>Total PMPM</td>
<td>$6,531</td>
<td>$6,565</td>
<td>$6,712</td>
<td>$6,794</td>
<td>$7,061</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th></th>
<th>FY 15</th>
<th>FY 16</th>
<th>FY 17</th>
<th>FY 18</th>
<th>FY 19</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Under 65 Years</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nursing Facility Expenditures</td>
<td>$7,045</td>
<td>$7,018</td>
<td>$7,243</td>
<td>$7,291</td>
<td>$7,554</td>
</tr>
<tr>
<td>Other Medicaid Expenditures</td>
<td>$1,144</td>
<td>$1,158</td>
<td>$1,140</td>
<td>$1,081</td>
<td>$1,127</td>
</tr>
<tr>
<td>Total PMPM</td>
<td>$8,121</td>
<td>$8,115</td>
<td>$8,325</td>
<td>$8,315</td>
<td>$8,628</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th></th>
<th>FY 15</th>
<th>FY 16</th>
<th>FY 17</th>
<th>FY 18</th>
<th>FY 19</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>65 and Older</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nursing Facility Expenditures</td>
<td>$6,012</td>
<td>$6,029</td>
<td>$6,152</td>
<td>$6,273</td>
<td>$6,512</td>
</tr>
<tr>
<td>Other Medicaid Expenditures</td>
<td>$147</td>
<td>$155</td>
<td>$168</td>
<td>$165</td>
<td>$182</td>
</tr>
<tr>
<td>Total PMPM</td>
<td>$6,159</td>
<td>$6,165</td>
<td>$6,302</td>
<td>$6,420</td>
<td>$6,676</td>
</tr>
</tbody>
</table>

Note: PMPM calculations were made by dividing the annual expenditures by the total number of member months (defined as a count of months with at least one Medicaid paid day for each Medicaid nursing facility resident) in each year. Medicare costs for nursing facility residents are not included in this analysis.

Source: MMIS2

Total PMPM for all ages increased an average of 2.0% across the study years.

The vast majority of expenditures for both age groups were for nursing facility expenditures.

Other Medicaid expenditures for persons ages 65 and older were far lower than those for the younger age group. This is likely due to Medicare payment of services.
Chapter 4.
Nursing Facility Discharge
Chapter 4. Nursing Facility Discharge

Key Findings

Discharge Status

Approximately 36% of the discharges from a Maryland nursing facility in FY 2015 and 40% in FY 2019 were a result of a resident passing away. The percentage of residents discharged to the community was 36% in FY 2015 and 33% in FY 2019. See Figure 22.

HCBS Received in the Community Post Discharge

In FY 2019, 71% of nursing facility residents discharged to the community received a CO, CFC, or CPAS service. The highest percentage (41%) of residents discharged to the community received case management/supports planning services, 18% received personal assistance services, and 11% received personal emergency response system and monitoring services. Personal assistance services accounted for 50% of expenditures for HCBS for those discharged to the community. See Figure 23.
Regarding discharge status of the most recent stay, 36% was due to dying while in the nursing facility in FY 2015, and 40% in FY 2019. The percentage of residents discharged to the community was 36% in FY 2015 and 33% in FY 2019. In FY 2019, 25% were discharged to an acute hospital—a slight decrease from 26% in FY 2015.

*Other places discharged to include psychiatric hospital, inpatient rehabilitation facility, ID/DD facility, hospice, long-term care hospital, and other.

Source: MDS

Note: Discharge status is based on the assessment for the most recent stay.
Seventy-one percent of nursing facility residents discharged to the community received a CO, CFC, or CPAS service in the 30 days after discharge. While personal assistance services accounted for the largest percentage of costs (50%), the largest percentages of participants (41%) received case management/supports planning services.

<table>
<thead>
<tr>
<th>Service</th>
<th>Cost</th>
<th>Percentage of Total Cost</th>
<th>Percentage of Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assisted living facility</td>
<td>$406,915</td>
<td>17%</td>
<td>9%</td>
</tr>
<tr>
<td>Case management/supports planning</td>
<td>$376,778</td>
<td>16%</td>
<td>41%</td>
</tr>
<tr>
<td>Items that substitute for human assistance</td>
<td>$52,401</td>
<td>2%</td>
<td>5%</td>
</tr>
<tr>
<td>Medical day care</td>
<td>$161,502</td>
<td>7%</td>
<td>5%</td>
</tr>
<tr>
<td>Nurse monitoring</td>
<td>$45,377</td>
<td>2%</td>
<td>9%</td>
</tr>
<tr>
<td>Personal assistance services</td>
<td>$1,171,773</td>
<td>50%</td>
<td>18%</td>
</tr>
<tr>
<td>Personal emergency response system and monitoring</td>
<td>$27,403</td>
<td>1%</td>
<td>11%</td>
</tr>
<tr>
<td>Transition services</td>
<td>$85,723</td>
<td>4%</td>
<td>3%</td>
</tr>
<tr>
<td>Total</td>
<td>$2,327,873</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: MDS and MMIS2

Note: Services with a cell size of 11 cases or less are omitted.
Chapter 5.
In the Community: Comparisons between HCBS Users and Nursing Facility Residents
Chapter 5. In the Community: Comparisons between HCBS Users and Nursing Facility Residents

Key Findings

Balancing Maryland’s LTSS

Historically, higher percentages of Maryland Medicaid LTSS users received services in nursing facilities than in the community. To balance the HCBS-to-nursing facility LTSS users, Maryland implemented a number of initiatives such as the Money Follows the Individual (MFI) Act of 2003, the Money Follows the Person Demonstration (MFP), 1915(c) waivers, the Balancing Incentives Program (BIP), and CFC. Figure 24 shows that these initiatives appear to be working; the percentage of nursing facility residents decreased from 63% of the LTSS population in FY 2015 to 55% by FY 2019. At the same time, the HCBS users increased from 37% of the LTSS population to 45%.

LTSS Expenditures

As a portion of LTSS expenditures, HCBS expenditures increased from 22% in FY 2015 to 28% in FY 2019. On average, nursing facility expenditures increased approximately 1% each year. See Figure 25.

During the study period, average annual costs were $47,949 for nursing facility residents and $23,190 for HCBS users. As such, HCBS users’ average annual costs were 49% of nursing facility residents’ average annual costs (Figure 26). Similarly, total Medicaid PMPM expenditures were $4,383 less, on average, for HCBS users than for nursing facility residents (Figure 27).
Historically, a larger percentage of Marylanders received Medicaid LTSS in a nursing facility than in the community. However, between FYs 2015 and 2019, the percentage of LTSS users receiving services in the community increased from 37% to 45%.

**Note:** Home and community-based programs include Maryland’s 1915(c) waivers—Community Options (previously Older Adults and Living at Home), and Medical Day Care—and state plan personal care programs—Medical Assistance Personal Care (now Community Personal Assistance Services) and Community First Choice.

**Source:** MMIS2
Figure 25. Medicaid HCBS and Nursing Facility Expenditures (in Billions), FY 2015–FY 2019

Total LTSS expenditures were $1.71 billion in FY 2019, an increase of 15% from FY 2015. In FY 2015, HCBS accounted for 22% of total LTSS spending, but by FY 2019, it was 28% of LTSS spending.

Additionally, HCBS expenditures increased an average of 11% each year during the study period, while nursing facility expenditures increased an average of 1% each year.

Note: Home and community-based programs include Maryland’s 1915(c) waivers—Community Options (previously Older Adults and Living at Home), and Medical Day Care—and state plan personal care programs—Medical Assistance Personal Care (now Community Personal Assistance Services) and Community First Choice. Expenditures do not include non-waiver services.

Source: MMIS2
Figure 26. Comparison of Average Annual Costs for HCBS Users and Nursing Facility Residents, FY 2015–FY 2019

Annual per-person LTSS expenditures for HCBS have historically been less costly than those provided in a nursing facility. Between 2015 and 2019, the average annual cost per person was $24,758 less for HCBS users than for nursing facility residents.

Note: Home and community-based programs include Maryland’s 1915(c) waivers—Community Options (previously Older Adults and Living at Home), and Medical Day Care—and state plan personal care programs—Medical Assistance Personal Care (now Community Personal Assistance Services) and Community First Choice. Expenditures do not include non-waiver services. A nursing facility annual stay is 7 to 8 months, on average. Acuity levels of the populations were not factored in.

Source: MMIS2
Figure 27. PMPM Medicaid HCBS Expenditures and Nursing Facility Expenditures, FY 2015–FY 2019

The PMPM total Medicaid expenditures for HCBS users were, on average, $4,383 lower than for nursing facility residents.

Note: Home and community-based programs include Maryland’s 1915(c) waivers—Community Options (previously Older Adults and Living at Home), and Medical Day Care—and state plan personal care programs—Medical Assistance Personal Care (now Community Personal Assistance Services) and Community First Choice. Expenditures do not include non-waiver services. A nursing facility annual stay is 7 to 8 months, on average. Acuity levels of the population were not factored in.

Source: MMIS2
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Chapter 5. In the Community: Comparisons between HCBS Users and Nursing Facility
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